**Remarks**

Claim 91 has been amended to overcome the objection to it by making it depend on alternative claims.

The Examiner is thanked for the interview with the undersigned. The claims have been amended as discussed in the interview to overcome the rejection of the claims under Section 112, para. 1. The objectionable limitations have been deleted and limitations conforming to those discussed have been inserted in claim 76 and newly added independent claim 97.

The rejection of claims 91-93 under Section 112, para. 2 has been overcome by amendment to delete the objectionable language/dependency.

The rejection of the claims under Section 103(a) over Margel in view of Singer et al. and Jack et al. should be withdrawn. The Examiner concedes that Margel and Singer et al. do not disclose particles "in a loosely packed, ordered array" (claim 76) or an array "where the particles are not touching each other" (claim 97). Jack et al. disclose a "retro-reflective material comprising embedding beads in a generally planar plastic matrix and embossing the material so that axes of exposed portions of the beads lie at varying angles to the general plane of the matrix," (Abstract) and state (in the specification):

> The mono-layer of beads may be a continuous or noncontinuous layer of beads which may contain any number of beads up to the maximum, which, in the case of beads of substantially equal diameter, corresponds to the beads being in hexagonally close-packed array. When the beads are in hexagonally close-packed array they are at their maximum bead-density. For the purpose of this specification bead-density is defined as the average number of beads per square millimeter of matrix surface prior to embedding and embossing, over the area under consideration.

Beads in such arrangement, *i.e.*, at a maximum density, would be touching each other. Accordingly, none of the references disclose or suggest beads in an array for use in biological assays where the beads are "in a loosely packed, ordered array" (claim 76) or in an array "where the particles are not touching each other" (claim 97). This arrangement is used in the invention, as the beads must be individually distinguished/resolved when imaged so that the image can be used to decode the array – thus they need to be spaced from each other. Jack et al. is also from a very different art and for a different purpose than Margel or Singer et al., and should not be combined with the other references to establish obviousness. For example, in Fig. 1 of Jack et al. it shows the beads lying on a curved surface, with some beads lying partly over other beads. This would prevent beads from being individually distinguished/resolved when imaged, and the combination of Margel and Singer et al. necessitates a planar arrays of beads, so that the signals from the beads (like in Singer et al.) can be distinguished (as set forth in the claim). (*See* MPEP

2143.01(V) "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.")

In conclusion, all claims are allowable.